

PROCEEDINGS OF THE
ROYAL ENTOMOLOGICAL SOCIETY
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ORDINARY MEETING

WEDNESDAY, 1st MARCH, 1961, at 5.30 p.m. (Tea 5 p.m.)

AGENDA

1. Confirmation of the Proceedings of the Ordinary Meeting held on 18th January, 1961.
2. Announcement of Vice-Presidents for 1961.
3. Recommendations of candidates for Fellowship. First reading.
4. Recommendations of candidates for Fellowship. Second reading.
5. Announcement of election of new Fellows.
6. Additions to the Library [see p. 4].
7. Admission of Fellows.
8. Exhibits.
9. Communications.

1. Mr. W. W. Macdonald

Observations on the ecology of mosquitoes in the tropical rain forest of Malaya.

[ABSTRACT]

There is an exceptionally rich and varied mosquito fauna in the tropical rain forest of Malaya. This is especially true of secondary "fringe" forest, where more than 160 species of mosquito have been collected, but may not apply quite so much to primary, undisturbed forest, where conditions are less varied than at the edge.

The variety of mosquitoes is in part related to the varied flora in fringe forest, and in particular to the presence of bamboos. More than 60 mosquito species may breed in one or other of the larval habitats which bamboos provide, and some of these species have been found nowhere else.

A general account of the mosquitoes of rain forest will be presented, and comparisons will be drawn with the mosquitoes of other ecological zones, such as coastal areas. Some of the more interesting larval habitats and adult habits of the mosquitoes will be described.

2. Dr. P. T. Haskell

Stridulation and associated behaviour in certain beetles.

[ABSTRACT]

Despite the interest in and voluminous literature on stridulatory mechanisms in beetles, observations and interpretations of the behaviour associated with sound

emission are fragmentary and apparently often fallacious. The paper, which will be illustrated with tape recordings, will review the evidence available on sound emission and reception in the case of several genera and discuss it in relation to three possible uses of sound signals, defensive, sexual and sub-social.

NOTICES

The next meeting will be held on *Wednesday, 5th April, 1961* :

(1) **Mr. J. D. Bletchly.**—The effect of sub-lethal dosages of gamma radiation on a population of *Lyctus brunneus* Stephens (Coleoptera : Lyctidae).

(2) **Mr. E. C. Harris.**—The value of fumigation for the control of wood-boring insects.

Insect Polymorphism

A Symposium on the above subject will be held in the Society's rooms on **21st–22nd September, 1961**. Full details will be sent to all Fellows at the end of March (with the agenda for the April meeting).

PROCEEDINGS OF THE ORDINARY MEETING HELD ON 18TH JANUARY, 1961

Mr. E. O. PEARSON, Vice-President, in the Chair.

Present, 79 Fellows and 14 Visitors.

The minutes of the Ordinary Meeting held on 7th December, 1960, were confirmed and signed by the Vice-President.

The names of the following candidates for election were read for the first time : Mr. Edward Frederick Ivor Baker, B.Sc. ; Mr. John Balfry Davies ; Mr. Michael Frith ; Mr. Anthony Mervyn Gower ; Mrs. Jeelani Haq ; Mr. John Farlow Lamerton ; Mr. David Archibald Muir, B.Sc. ; Mr. William John Norton ; Mr. William L. Peters ; Mr. Brian Holt Riley ; Mr. David Henry Udall ; and Mr. Mohammad Zaka-ur-Rab.

For the second time (taken as read) : Miss Sheila Joan Brydon ; Mr. David Ellis Evans ; Mr. Keith Geoffrey Goodyear ; Mr. Ayodhya Prasad Gupta ; Mr. John Peter Leader ; Mr. David Cecil Richard Lincoln ; Mr. David James de Bar Lyon, B.Sc. ; Mr. Herman Auguste Mould, B.A. ; Mr. Adrian Charles Pont ; and Mr. Nigel Boyd Potter.

The Secretary read the names of the following newly elected Fellows of the Society : Mr. Peter James Baker, 31a, Brigstock Road, Thornton Heath, Surrey ; Mr. Francis George Browne, c/o W. African Timber Borer Research Unit, P.O. Box 1917, Kumasi, Ghana ; Mr. Peter Thomas Cumming, 16, Heatherdene, West Horsley, Leatherhead, Surrey ; Mr. Eric William Groves, British Museum (Natural History), Cromwell Road, London, S.W.7 ; Miss Valerie Healey, B.Sc., 13, Booth Avenue, Fallowfield, Manchester, 14 ; Mr. Abdul Rashid Mir, 48, Mapperley Road, Nottingham ; Mr. Henry John Dickinson, B.Sc., Abinger Cottage, Paston, Norfolk ; and Dr. Adrianus Berty Stam, Ph.D., Soestdyksekade 763, Den Haag, Holland.

Thanks were voted to donors of gifts to the Library since the last meeting.

The Secretary read for the second time the nominations for Officers and Council for 1961.

Mr. P. R. Bailey, Mr. E. W. Groves and Mr. D. Jacques signed the Obligation Book and were admitted Fellows of the Society.

Dr. R. L. Edwards made a short communication on a new method of forecasting grasshopper outbreaks, using preceding weather conditions. Dr. Edwards said that during the past 25 years there had been a very high correlation between grasshopper

populations in Saskatchewan and certain preceding weather conditions. If this relationship remained the same in the future, as in the past, it could be used to predict future outbreaks. A method for doing this had been developed and promised to be more accurate than the present survey method. It had the added advantage that it required no specialised knowledge of grasshoppers or field work and could be compiled in two man-days of effort.

The meeting had been arranged to give Fellows an opportunity of hearing more of the aims and achievements of the Nature Conservancy. **Dr. E. A. G. Duffey** (a visitor) spoke on reserve management at Wood Walton Fen, where the management plans had been drawn up with special regard to the insect fauna, and **Mr. M. V. Brian** (a visitor) spoke on the use of nature reserves for research, with particular reference to the work on ant populations being carried out at Furzebrook Research Station.

The discussion which followed was opened by the Vice-President, who said it appeared that the Conservancy were envisaging a system of management which would involve a definite rotation and he wondered what sort of number of rotational units they had in mind. It occurred to him that they might run into trouble in the sense that it might be possible to establish a regular series of succession which could be kept up indefinitely, but individual units might be too small for some of the species they were anxious to preserve. Dr. Duffey replied that they had not reached a stage when they could comment on results—the techniques were still being explored and the possible effects on the fauna and flora were not yet known.

Mr. M. E. Solomon asked whether it was thought that the agricultural background of the Fen would be a stable enough environment for long-term study, or whether changes in the water table and other factors would be taken into account in the programme. Dr. Duffey replied that the problem of maintaining the table could be solved. The surrounding land was expected to stay more or less as at present—parts were more alkaline than fifty years ago, but the change did not affect the entire fen as some areas had a marked buffering effect.

Mr. W. B. Broughton wondered whether the conservation programme was bold enough and suggested that parallel work elsewhere and a succession of reserves was desirable.

Mr. G. M. Spooner said he felt that the policy of the Nature Conservancy in maintaining a diversity of habitats was sound. He wondered how far Dr. Duffey expected to be able to check the steady accumulation of soil in the future. The preservation of rare species was an important element of the work at Wood Walton Fen as there were few places for the "North Sea" fauna to exist. He was disturbed to hear of the burning of felled trees, and pleaded for them to be allowed to rot and form natural habitats for beetles. Dr. Duffey replied that burning was essential because of the sheer numbers of trees and bushes; it was too early to comment on the other points.

Dr. A. M. Massee followed on Mr. Solomon's enquiry and asked if any survey was being made of the agricultural land adjoining Wood Walton Fen. He recalled that at Wicken there was a greater and more varied population on the edge than in the Fen itself and it would be instructive if, when surveys were made, the edge could be included to see if the same applied. Dr. Duffey confirmed that they were interested in the border habitats.

Mr. F. D. Buck said it would be a tragedy if the fens were allowed to deteriorate and added that Wood Walton Fen was puzzling because of its enormous population fluctuations. Dr. Duffey said the most striking fluctuation was in the plant population, and plants absent 10 or 15 years ago had reappeared. There might be some insects and arachnids which were very scarce in periods of adverse conditions.

Mr. M. J. Way commented on the precise boundaries shown in the ant colonies discussed by Mr. Brian and asked whether the boundaries between different species were as sharp as those between the same species. Mr. Brian replied that the boundaries were fairly sharp and often permanently "manned".

Mr. E. S. Brown commented that in the tropics boundaries seemed sharper between colonies of the same species than between different species, which sometimes overlap. He asked if Mr. Brian had carried out any experiment to see if there was evidence of shrinkage in size being due to expansion of adjoining colonies. Mr. Brian replied that this had not been possible.

PAUL FREEMAN, *Honorary Secretary.*

ADDITIONS TO THE LIBRARY

Presented

- Arnett, R. H. *The beetles of the United States. (A manual for identification.)* Section 1. Fasc. 1-9. 8vo. Catholic University of America Press, 1960. [The Publishers.]
 Froeschner, R. C. Cydnidae of the Western Hemisphere. *Proc. U.S. nat. Mus.* 111 : 337-680, 1960. [The Publishers.]
Guide to the insects of Connecticut. Part VI. The Diptera or true flies. Fasc. 7. Psychodidae, by L. W. Quate. 8vo. Middletown, Conn., 1960. [*Bull. Conn. geol. nat. Hist. Surv.* 92.] [The Publishers.]
 Hocking, B. *Smell in insects ; A bibliography with abstracts* (to December, 1958). 4to. Defence Research Board, Canada, 1960. [Department of Entomology, University of Alberta.]

Purchased

- Breuning, S. *Catalogue des Lamiaires du Monde (Col. Céramb.).* Lief. 3. 8vo. Tutzing bei München : Museum G. Frey, 1960.
Insects of Micronesia. Vol. 4 (2) Crustacea : Amphipoda (Strand and terrestrial Talitridae), by J. L. Barnard.
 Vol. 6 (5) Homoptera : Cicadellidae, by R. Linnavuori, and Membracidae, by M. Kato.
 Vol. 7 (5) Heteroptera. Enicocephalidae, by R. L. Usinger and P. Wygodzinsky. Reduviidae, by P. Wygodzinsky and R. L. Usinger. Cimicidae, by R. L. Usinger and G. F. Ferris.
 Vol. 13 (3) Diptera : Tabanidae, by A. Stone, and Empididae, by L. W. Quate. 8vo. Honolulu : Bishop Museum, 1960.
Klucze do oznaczania owadów Polski. 8vo. Warsaw. 33. Fam XXVII. Lepidoptera. 46a. Geometridae : S. Bleszyński, 1960.
 Peterson, A. *Entomological Techniques ; How to work with insects.* 9th edition. 4to. 1959.
Report of the Seventh Commonwealth Entomological Conference, 6th-15th July, 1960. 8vo. Commonwealth Institute of Entomology, 1960.

In addition separates have been presented by the American Entomological Society ; Dr. R. E. Snodgrass ; Dr. M. L. Jerath ; United States Department of Agriculture ; Mr. A. E. Gardner ; Mr. S. R. Bowden ; Dr. L. G. Higgins ; Mr. W. W. Macdonald ; Commonwealth Institute of Entomology ; Dr. C. A. Edwards ; Mr. W. H. Potts ; Department of Entomology, London School of Hygiene and Tropical Medicine ; Mr. E. W. Classey ; The Trustees of the British Museum ; Department of Entomology, University of Alberta ; Professor J. L. Cloudsley-Thompson ; Dr. D. Hille Ris Lambers and Mr. H. L. G. Stroyan ; and Mr. P. Osborne.